

REMARKS

Claims 1-4 are currently pending in the application. Claims 5-35 have been canceled.

I. 35 U.S.C. § 103, Obviousness

The Examiner has rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over Hirst (US Patent No. 5,789,723). The rejection is respectfully traversed.

In rejecting claim 1, the Examiner writes:

Regarding claim 1, Hirst discloses a device comprising (Figure 12) (a) a diode; (b) a resistor in series with a switch (M2), with the resistor coupled to the diode; (c) an RC filter in parallel with the resistor and switch of element (b).

The only difference between Hirst and the invention claimed is that the claim recites the resistor coupled to the cathode of the diode in place of the resistor coupled to the anode of the diode.

It would have been obvious to one of ordinary skill in the art [*sic*] at the time the invention was made to couple the resistor to the cathode of the diode instead [*sic*] of coupling to the anode as taught by Hirst because coupling the resistor before or after the diode (i.e. couple the resistor to anode or couple to cathode) the function of the circuit does not change since the current, either being rectified (Resistor couples to the cathode) or not (couple to the anode), flows through the switch and will be modulated to obtain desired results.

The significance of coupling the series resistor to the cathode versus the anode is explained on page 6 of the specification, first paragraph. Specifically,

The diode **204** lets the sensed switch current signal through but prevents the voltage V_S as well as V_{lavg} from being discharged. The switch **208** is a control switch to adjust the sensed dc current signal to reflect the real dc output current. If the load current is decreased, for example, the in-coming current sensing signal is lower than the sensed dc current signal V_{lavg} . As a result, V_{lavg} will be discharged during turn-on of switch **208** through resistors **210** and **206**, and switch **208**, being brought down to the level corresponding to the level of the new dc output current.

(Specification, page 6, lines 11-18)

As can be understood from the above explanation, coupling the resistor to the anode, as is done in Hirst, will not prevent the voltage across the resistor (and the control switch) from being discharged the way the claimed invention does. Therefore, the Hirst invention cannot duplicate the current estimation function of the claimed invention. As such, coupling the resistor to the diode cathode instead of the anode is not a trivial difference as concerns average current estimation.

In a proper obviousness determination, regardless of whether the changes from the prior art are "minor," the changes must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the claimed invention. *In re Chu*, 66 F.3d 292, 298, 36 U.S.P.Q.2d 1089, 1094 (Fed. Cir. 1995).

There is nothing taught in Hirst that suggests the average current estimation circuit as claimed, nor has the Examiner specifically cited any part of Hirst that suggests such a modification.

The mere fact that the prior art could be readily modified to arrive at the claimed invention does not render the claimed invention obvious; the prior art must suggest the desirability of such a modification. *In re Ochiai*, 71 F.3d 1565, 1570, 37 U.S.P.Q.2d 1127, 1131 (Fed. Cir. 1996); *In re Gordon*, 733 F.2d 900, 903, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). Merely stating that the modification would have been obvious to one of ordinary skill without identifying an incentive or motivation for making the proposed modification is insufficient to establish a *prima facie* case.

Because claims 2-4 depend from claim 1, and therefore contain the limitations of claim 1, they are distinguished from Hirst for the reasons stated above.

Therefore, it is respectfully urged that the rejection of claims 1-4 under 35 U.S.C. § 103 has been overcome and should be withdrawn.

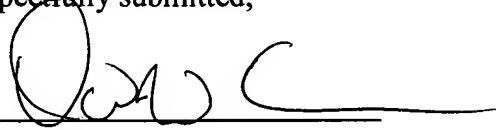
Conclusion

It is respectfully submitted that the claims are now in condition for allowance and are patentable over the cited prior art reference.

A first Office Action on the merits is now respectfully awaited. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is cordially invited to contact David W. Carstens at 972.367.2001.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'DWC', is written over a horizontal line.

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